

WHAT IS CLAIMED IS:

1. A measuring distance device comprising:

a sensor array which detects an image signal
related to an object to be photographed in a finder
5 screen;

a projection unit which projects a signal light on
the object;

a selection unit which selects a detection area
for the image signal of the sensor array;

10 a change unit which makes a detection area
selected by the selection unit when projection of the
signal light is performed by the projection unit
different from a detection area selected by the
selection unit when projection of the signal light is
15 not performed by the projection unit; and

a focus adjustment unit which performs focus
adjustment on the basis of an image signal output in
the detection area of the sensor array selected by the
selection unit.

20 2. A measuring distance device according to
claim 1,

wherein the change unit

makes the detection area of the sensor array
obtained when projection of a signal light is performed
25 by the projection unit narrower than the detection area
of the sensor array obtained when projection of the
signal light is not performed.

3. A measuring distance device according to
claim 1,

wherein the projection unit includes an infrared
light-emitting unit and an electronic flash device.

5 4. A measuring distance device according to
claim 3,

wherein the change unit

10 makes a detection area selected by the selection
unit when projection of a signal light is performed by
the electronic flash device narrower than the detection
area selected by the selection unit when projection of
the signal light is performed by the infrared light-
emitting unit.

15 5. A measuring distance device according to
claim 3,

wherein the change unit

20 makes a detection area selected by the selection
unit when projection of a signal light is performed by
the infrared light-emitting unit narrower than the
detection area selected by the selection unit when
projection of the signal light is performed by the
electronic flash device.

6. A measuring distance device according to
claim 1,

25 wherein the measuring distance device includes a
determination unit which determines, depending on a
result of a measuring distance operation performed

without projection of a signal light by the projection unit, whether the projection unit is used in a subsequently performed original measuring distance operation or not.

5 7. A measuring distance device comprising:

 a sensor array which detects an image signal related to an object to be photographed in a finder screen;

 a first projection unit which projects a first
10 signal light for a measuring distance operation on the object;

 a second projection unit which projects a second signal light for a measuring distance operation on the object;

15 a first measuring distance unit which performs a measuring distance operation on the basis of an image signal output from the sensor array without projection of the signal lights for a measuring distance operation by the first and second projection units;

20 a second measuring distance unit which performs a measuring distance operation on the basis of an image signal output from the sensor array with projection of the signal light for a measuring distance operation by the first projection unit;

25 a third measuring distance unit which performs a measuring distance operation on the basis of an image signal output from the sensor array with projection of

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the signal light for a measuring distance operation by the second projection unit;

a selection unit which selects any one of the first to third measuring distance units;

5 a change unit which changes detection areas for the image signal by the sensor array depending on a selection result of the selection unit; and

10 a focus adjustment unit which performs focus adjustment on the basis of an image signal output in the detection area of the sensor array selected by the selection unit.

8. A measuring distance device according to claim 7,

15 wherein the selection unit selects the first measuring distance unit and selects either the second measuring distance unit or the third measuring distance unit depending on the reliability of a measuring distance result or selects neither of the second and third measuring distance
20 units.

9. A measuring distance device according to claim 7,

25 wherein the change unit makes the detection area of the sensor array widest when the first measuring distance unit is selected and makes the detection area of the sensor array narrowest when the third measuring distance unit

is selected.

10. A measuring distance device according to claim 7,

wherein the change unit

5 makes the detection area of the sensor array widest when the first measuring distance unit is selected and makes the detection area of the sensor array narrowest when the second measuring distance unit is selected.

10 11. A measuring distance device according to claim 7,

wherein the first projection unit is an infrared light-emitting diode.

12. A measuring distance device according to claim 7,

wherein the second projection unit is an electronic flash device.

13. A measuring distance device comprising:

20 a sensor array which detects an image signal related to an object to be photographed in a finder screen;

an integration control unit which integrates the image signal detected by the sensor array;

25 a first projection unit which projects a first signal light for a measuring distance operation on the object;

a second projection unit which projects a second

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signal light for a measuring distance operation on the object;

a selection unit which selects a detection area for the image signal detected by the sensor array;

5 a first control unit which determines whether, depending on an integration voltage of the integration control unit when projection of light for a pre-measuring distance operation is performed by the first projection unit, an original measuring distance
10 operation is performed by using the first projection unit or an original measuring distance operation is performed by using the second projection unit;

a second control unit which changes detection areas selected by the selection unit depending on a
15 determination result of the first control unit; and

a focus adjustment unit which performs focus adjustment on the basis of an image signal output in the detection area of the sensor array selected by the selection unit.

20 14. A measuring distance device according to claim 13,

wherein the first control unit

determines that a measuring distance operation is performed by using the first projection unit when the
25 integration voltage satisfies a predetermined condition and that a measuring distance operation is performed by using the second projection unit when the integration

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voltage does not satisfy the predetermined condition.

15. A measuring distance device according to claim 14,

wherein the second control unit

5 makes a detection area of the sensor array obtained when a measuring distance operation is performed by using the first projection unit wider than a detection area of the sensor array obtained when a measuring distance operation is performed by using the
10 second projection unit.

16. A measuring distance device according to claim 14,

wherein the second control unit

15 makes a detection area of the sensor array obtained when a measuring distance operation is performed by using the first projection unit narrower than a detection area of the sensor array obtained when a measuring distance operation is performed by using the second projection unit.

20 17. A measuring distance device according to claim 14,

wherein the measuring distance device includes a timer unit which counts an integration time of the integration circuit when projection of light for a
25 measuring distance operation is performed before projection of light for a pre-measuring distance operation by the first projection unit, and

the first control unit determines, in consideration of a count result of the timer unit, one of the projection units by which an original measuring distance operation.

5 18. A measuring distance device according to claim 17,

 wherein a predetermined value to be compared with the integration voltage is changed depending on a time counted by the timer unit.

10 19. A measuring distance device according to claim 13,

 wherein the measuring distance device includes a decision unit which decides the reliability of an integration result obtained by the integration circuit when projection of light for a measuring distance operation by the first or second projection unit is not performed, and

 when the decision unit decides that the reliability is low, a pre-measuring distance operation with projection of a signal light for a measuring distance operation by the first projection unit.

20 20. A measuring distance device according to claim 19,

 wherein when the decision unit decides that the reliability is high, a triangular measuring distance operation on the basis of an integration result of the integration control unit.

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21. A measuring distance device according to claim 13,

wherein the measuring distance device includes a second decision unit which decides whether a triangular measuring distance operation can be performed on the basis of an output from the integration circuit or not after the original measuring distance operation with projection of light for a measuring distance operation by the first or second projection unit.

22. A measuring distance device according to claim 21,

wherein when the second decision unit decides that the triangular measuring distance operation cannot be performed, a measuring distance operation based on a reflected light quantity of the object is performed.

23. A measuring distance device according to claim 13,

wherein the first projection unit is an infrared light-emitting diode.

24. A measuring distance device according to claim 13,

wherein the second projection unit is an electronic flash device.